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1 Piece UHNK6 MA1

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Field Service Bulletin No. 44 for

ADC Compact

Type 5145 / 100/101/140

Type 5145 / 200/201/240

	Classification				When		
	Safety relevant	Reliability	New function	Information	Immediately	Next service	As required
for all items		X					X

Light and Dark Stripes Parallel to Slow Scan Direction (Burle Photomulitiplier)

1 Problem

Light and dark stripes parallel to slow scan direction (see Figure 1). The appearance is similar to a bad calibration (shading correction).

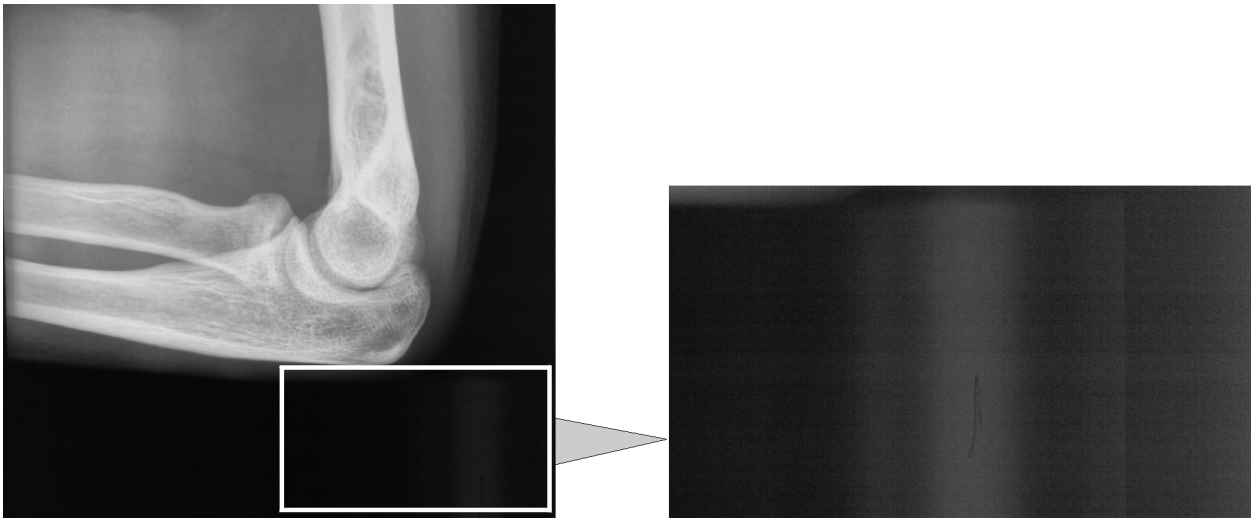

Figure 1 Light and Dark Stripes

This problem comes up with high exposure doses as used for. e.g. :

- exposures of the upper and lower extremities using speed class 100 or lower.
- exposures of the Leeds spatial phantom used with the ADC AutoQC package.
- exposures of standard flat field images (75 kVp, 1,5 mm copper filter, 130 cm source detector distance) using speed class 100 or lower and a dose of 2 x 20 µGy or higher.

2 Reason

Production tolerances of a certain batch of photomultiplier tubes (PMT) manufactured by Burle.

Notice, that only devices equipped with a Burle PMT may potentially show this effect. Machines delivered with Photonis PMT do not show this problem.

Not all Burle PMTs are faulty.

Some ADC Solo digitizers may also be concerned. The following serial numbers of the ADC Solo work properly:

- Type 5155/100: SN 1120, 1166, 1171, 1172, ≥ 1176
- Type 5155/200: SN ≥ 8001.

3 Solution

In case of images with light and dark stripes parallel to slow scan direction find out whether a Burle PMT is installed. You will be able to distinguish a Burle PMT from a Photonis PMT by the MFB value:

- Burle PMT
  MFB ranges from 0,26 maximal to 0,29
- Photonis PMT
  MFB ranges from 0,33 maximal to 0,38

To find out the MFB value either take a look at the label of the PMT or list the device parameters including the MFB. Therefore, start a terminal connection to the ADC Solo via Telnet or terminal emulation. The terminal prompts for entering **<nve SCNXXX00>**.

If you are sure that the problem is caused by a faulty Burle PMT, order a new PMT (CM+9.5145.2060.0) and exchange it.

To exclude any other reason for the problem, please contact GSC Munich before exchanging the PMT.

Further information on this topic will follow!

Information on the ADC Solo will follow as soon as possible.